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EXAMINER	
KASRAIAN, ALLAHYAR	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/614,803	BUSI ET AL.	
	Examiner	Art Unit	
	Allahyar Kasraian	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-9 and 12-15* is/are rejected.

7)☒ Claim(s) *5,6,10 and 11* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **1, 2, 7-9 and 12-15** are rejected under 35 U.S.C. 102(e) as being anticipated by **Bannai et al. (U.S. Pub. # 2003/0208525 A1)** (hereafter Bannai).

Consider **claims 1 and 8**, Bannai clearly shows and discloses a method and a telecommunication transmission network for end-to-end connection between a first client layer connected to a Resilient Packet Ring (RPR) network and a second client layer connected to a Multi Protocol Label Switching (MPLS) network, the method network comprising:

interconnecting the RPR network (see FIG. 2 for a member of domain A connected to node 108 on RPR network 102) and the MPLS network (see FIG. 2 for any member of domain a connected to networks 202, 212 or 214) through a Transparent LAN Service (TLS) layer (see FIGs. 5, 6, 7B and lines 7-13 of

paragraph 0046, where it says, "In one embodiment, the TLS microcode 422 appends the service header 506, a multicast MPLS label 710, and a ring header 712 to the incoming packet 700 (See, FIG. 7B) to form a ring packet 720. The line card 352 (FIG. 3) then forwards the ring packet 720 to the switching card 338 for transmission over the associated ring to all members of the associated TLS domain" and lines 4-5 of paragraph 0026, "Transparent LAN services may be provided for each of the domains A... an endpoint devices, such as a personal commuter, of domain A may send a data packet to another endpoint device of domain A using multicast MPLS (Multi Protocol Label Switching) protocol").

Consider **claims 2 and 9 as applied to claims 1 and 8 above respectively**, Bannai clearly shows and discloses the RPR network and the MPLS network are further interconnected through an interface consisting in a physical layer: wherein the physical layer is at least one of a Synchronous Digital Hierarchy (SDH), Synchronous Optical Networking (SONET), and an Ethernet (see FIG. 3, FIG. 4, lines 3-8 of paragraph 0035, "The ring interface cards 330 and 332 convert the incoming optical signals on fiber optic cables 334 and 336 to electrical digital signals for application to switching card 338. In one embodiment, the ring interface cards 330, 332 may be implemented as a singe card." It is inherently taught SDH or SONET physical layer is interface 330 and 332 that converts optical signals to electrical digital signals; and lines 1-4 of paragraph 0028, "Each of the nodes 104-110 may include physical ports, such as Ethernet and Gigabit Ethernet ports. These

physical ports may be configured to be a part of any of the domains A, B of the ring 102.").

Consider **claim 7 applied to claim 1 above**, Bannai clearly shows and discloses client layer is one of an Ethernet layer and an Internet Protocol (IP) layer. (see FIG. 3 and Fig. 4 and lines 1-4 of paragraph 0028, "Each of the nodes 104-110 may include physical ports, such as Ethernet and Gigabit Ethernet ports. These physical ports may be configured to be a part of any of the domains A, B of the ring 102.").

Consider **claims 12-13 and 14-15 as applied to claims 1 and 8 above respectively**, a computer readable medium having a program recorded thereon, said computer readable medium comprising computer program code means adapted to perform all the steps of claims 1 and 8 when said program is run on a computer that is inherently taught by Bannai et al. since some kind of memory is required to store the operating instructions for the system and for execution of the method.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

> the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims **3-4** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bannai et al. (U.S. Pub. # 2003/0208525 A1)**.

Consider **claim 3 as applied to claim 1 above**, Bannai et al. did not explicitly disclose a method for sending a packet in the direction from RPR to MPLS or MPLS to RPR.

However, Bannai et al. provides a clear suggestion for performing the claim steps when they disclose sending and receiving a TLS packet in combined MPLS and RPR networks by forming a ring packet as illustrated in FIG. 5 and FIG. 7B (as described on lines 7-10 of paragraph 0046, where it says, "the TLS microcode 422 (see FIG. 4) appends the service header 506, a multicast MPLS label 710 and a ring header 712 to the incoming packet 700 ... to form a ring packet 720.")

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the teaching method of Bannai et al. in order to route client frames in the direction from RPR to MPLS or from MPLS to RPR networks efficiently.

Consider **claim 4 as applied to claim 3 above**, Bannai et al clearly shows and discloses an auxiliary TLS Header is added to said received client frames, obtaining said TLS packets (see Service Header 506 in FIG. 5, and lines 1-4, where it says, "A transmitted data packet from one of the nodes... may also include a service header. The service header is generally used to communicate service level parameters..."); then an RPR Header is added to said TLS packets, obtaining said RPR packets (see FIG. 5, 7B, and 7C), and in that said TLS Header contains a channel identifier field, identifying the connection between the client layer connected to the RPR network (see FIG. 6, TTL

field 616, and lines 5-7 of paragraph 0055, where it says, "The TTL filed maybe 8 bits long and may be replaced with a hash ID of a ring card of the source node") and the client layer connected to the MPLS network (see FIG. 6, unicast label filed 608, and lines 1-2, where it says, "The unicast label filed 608 is used by the TLS service to indicate the source MPLS label..."), said TLS Header further containing Reserved bits (see FIG. 6, Unused filed 606) and Error correction bits (see FIG. 7A, and lines 7-8, where it says, "The incoming packet 700 may also include cyclic redundancy code...").

Allowable Subject Matter

5. Claims **5-6 and 10-11** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed 06/07/2007 have been fully considered but they are not persuasive.

On page 9 of applicant arguments/regards, applicant states that at no points does Bannai disclose a network ther than the ring network 200, let alone a MPLS networks, as claimed. Examiner respectfully disagrees since Bannai clearly indicate in lines 3-4 of paragraph 0030 "domin A may send a data packet to another endpoint device of domain A using MPLS protocol." It can be considered a single user in domain A of ring network

102 can send a packet to any user in domain A which is connected to WAN network 202 based on MPLS protocol trough TLS layer. Therefore, the other members of domain A on ring networks 212 and 214 can be considered as part of MPLS network when the destination MAC address from a source in ring network 102 is not found in association table (see paragraph 0046).

On page 9 of applicant arguments/regards, applicant states that there is no teaching or suggestion that a Transparent LAN Service layer interconnects an RPR network and an MPLS network. Examiner respectfully disagrees since FIG. 4 (with consideration of FIG. 3) shows system controller 402 which includes Multicast MPLS Client 412 and TLS manager 414, and ring card 408 with TLS microcode 432 (see paragraph 0036). The separation between MPLS client and Ring client are clearly shown and the functionality of TLS protocol between two clients are shown and described in details. Based on details in paragraphs 0036,0037, 0044-0046, and 0050, it can be conclude that TLS protocol interconnects RPR and MPLS networks.

On page 10-11 of applicant arguments/regards, applicant states, "Bannai is not at all concerned with interconnection between an RPR network and an MPLS network. Consequently, Bannai is not at all concerned with the encapsulation of packets from an RPR network to an MPLS network as claimed." Examiner respectfully disagrees with same reason stated above, and with regards with FIG. 5 and lines 7-13 of paragraph

0046 that clearly disclose the encapsulation of RPR and MPLS networks. FIG. 5 clearly shows an encapsulated packet with RPR header and MPLS label.

On page 11 of applicant arguments/regards, applicant states, "there is no teaching or suggestion regarding the transmission of packets in the direction from RPR network to an MPLS network and vice versa, let alone any discussion regarding the encapsulation and switching of packets until reaching a final destination." Examiner respectfully disagrees since Bannai in FIG 4 (with consideration of FIG. 3) clearly show how two networks (RPR and MPLS) are separated and from any direction a packet will be encapsulated and de-capsulated by TLS microcode 432 and managed by TLS manager 414 as described in paragraphs 0039-0041 and 0046.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allahyar Kasraian whose telephone number is (571) 270-1772. The examiner can normally be reached on Monday through Friday 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Allahyar Kasraian
AK/ak
August 30, 2007

KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER